

Preliminary Workload Assessment for the Illinois EPA Livestock Program

August 2011

Purpose

The purpose of this preliminary workload assessment is to 1) describe the current staffing level dedicated to the CAFO program in Illinois, 2) make reasonable estimates of the CAFO universe for which Illinois EPA must potentially issue permits, perform compliance inspections and conduct enforcement actions, and 3) estimate the number of staff necessary to satisfactorily operate the Illinois CAFO program consistent with the Clean Water Act, using a range of estimates for the CAFO universe.

Current Staffing

The Illinois EPA operates the CAFO program under the Bureau of Water, with five field offices conducting the inspections and assisting in compliance and enforcement. In the central Springfield office, the Agency conducts activities such as writing permits, processing compliance cases and legal activities in support of enforcement. Inspections and enforcement activities are carried out by the Field Operations Section. Oversight of compliance and enforcement is handled by the Compliance Assurance Section until case management is transferred to the Division of Legal Council. NPDES permits are issued by Permits Section. A breakdown of the current staffing is as follows:

<u>Activity</u>	<u>Agency Section</u>	<u>Staff</u>
Inspections	Field Operations	10
Compliance	Compliance	4
Enforcement	Legal	6
Permits	Permits	4

The staffing shown above does not include clerical or administrative support or the involvement of senior level management.

CAFO Estimates

In order to make reasonable estimates of the number of CAFOs in Illinois that may need NPDES permits, the Agency estimated the total number of CAFOs or AFOs in the State. From that estimate of the total number of CAFOs in Illinois, one could begin to estimate the number of CAFOs that must be permitted. However, coming up with the number of CAFOs that must be permitted, is much more difficult after the Fifth Circuit Court of Appeals decision in NPPC et al. v. USEPA, March 15, 2011. At the time this document is being drafted, EPA has not responded or clarified in regulation or guidance the Fifth Circuit Court of Appeals decision in NPPC et al. v. USEPA, decided March 15, 2011. Lacking this additional and necessary guidance, the criteria for determining if a livestock facility is required to obtain a permit must therefore arise from the federal CAFO regulations of November 20, 2008, as re-directed by the Fifth Circuit's NPPC decision. According to the 5th Circuit decision, only a facility that has an "actual discharge" is required to obtain a permit. The number of facilities with an actual discharge cannot be determined simply by knowing the total number of CAFOs or AFOs in the State. Additional information regarding the discharge must thus be obtained through an inspection of these facilities. Consequently, knowing the total number of CAFOs in Illinois without a mean of effectively reducing that figure to enumerate only those with an actual discharge will result in an over estimation which in turn would affect the size of the estimated workload of NPDES permits that might be required, and result in a wide range in the estimate of staff needed to review NPDES permit applications, inspect these facilities prior to or once permitted and enforce requirements for permitted CAFOs.

CAFO Universe in Illinois

We intend to determine the permitted number of possible CAFOs in Illinois only as an estimate since an actual number cannot be readily determined under the current federal CAFO program. The initial estimate of the total number of livestock operations in Illinois can be made from various sources, among those are the number of permitted livestock facilities under the LMFA from 1996 to present, the number of dairies currently inspected by the Illinois Department of Public Health, and the number of livestock facilities found in seven counties in Illinois using data collected from various sources in a project conducted by Western Illinois University for the Illinois EPA.

Source	Number of Facilities	Type or Size of Facilities
LMFA	1041	Facilities subject to permitting under the LMFA
LMFA	76	1—299 Animal Units
LMFA	174	300—999 Animal Units
LMFA	195	>1000 Animal Units

WIU*

Initial review suggests data overlap among these sources is problematic. The LMFA data do not account for multiple permits issued to the same CAFO. While IDPH dairies are listed as individual sites, they are for dairies only and therefore duplicate dairies found in the LMFA dataset. The WIU(*) project focused on only seven counties and used data from the LMFA and the IDPH, in addition to aerial photograph interpretation.

Estimated Staffing Needs

Estimating the permitted universe after the agreement in the February 24, 2011 Work Plan has become problematic given the decision in March 15, 2011 NPPC case. Producing an estimate of the grand total of livestock facilities or AFOs in Illinois may be possible but is not directly valuable when making a staffing workload assessment. In the post-NPPC decision world, in which only those AFOs that have an actual discharge must obtain a permit (as opposed to those of a certain size—Large CAFOs, for example—or those that may have the potential to discharge), determining which livestock facilities must be permitted will require surveillance, inspections and monitoring. The question before the Agency is: How many staff and of what types are needed to successfully operate the CAFO NPDES program under the existing law (post-NPPC)?

In looking at the workload and staffing in other states, we found:

- Indiana has issued 520 CAFO NPDES permits and 1468 separate state livestock facility permits, using 16 inspectors who use approximately 15% of their time on livestock activities and 6 permit writers who spend 100% of their time on NPDES (although it is unclear how much time they spend on livestock facilities).
- Michigan has issued 197 CAFO NPDES permits and less than 6 separate state livestock facility permits, using 5 permit writers who spend 100% of their time on NPDES (although it is unclear how much time they spend on livestock facilities). Michigan also planned to hire two additional permit writers as of early 2011.
- Minnesota has issued 1190 CAFO NPDES and separate state livestock facility permits.
- Ohio has issued 37 CAFO NPDES permits and 177 separate state livestock facility permits, using 1 permit writer.
- Wisconsin has issued 213 CAFO NPDES permits and no separate state livestock facility permits, using 8 inspectors/permit writers in the regional offices who spend 50—70% of their time on NPDES and 4.8 FTEs in the central office who spend 100% of their time on NPDES.

We obtained these data in February 2011, prior to the NPPC decision. Complicating any comparison to Illinois' CAFO program, requirements in some states mean that CAFOs with greater than 1000 animal units must obtain an NPDES permit, regardless of the potential to discharge. Workload in other states is also determined by how those permits are processed, whether by individual permits only (Ohio and Wisconsin) or by general permits. In Illinois, there is no similar requirement for permitting based on size (that is, there is no requirement that livestock facilities with >100AUs must obtain an NPDES permit) and all permits thus far have been by way of the general permit. Consequently, fewer permits are required in Illinois, and fewer still given the outcome of the NPPC case, and processing those applications under a general permit offers some minor time saving advantages.

Illinois also administers the Livestock Management Facilities Act construction permit requirements through the Illinois Department of Agriculture (Illinois DOA). To date, approximately 1400 LMFA permits have been issued by the Illinois DOA.

Given the uncertainties of establishing workload of operating CAFOs in Illinois that will need NPDES permits, Illinois EPA proposes to answer the question posed above (How many staff and of what types are needed to successfully operate the CAFO NPDES program under the present conditions (post-NPPC)?) by working to establish an adequate inventory using data from a variety of sources. The sources and future steps include:

1. LMFA: Illinois EPA has arranged to receive data from the IDOA that will allow us to monitor new and expanding livestock facility LMFA permits. This dataset is currently very robust and information contained in that dataset is very useful in establishing inspection priorities for the Illinois EPA.
2. IDPH: Dairy location information, currently on-hand, will be cross-referenced with other data, such as actual herd sizes or milk production figures, from IDPH to establish or estimate the number of head present at each of the over 800 dairies in the state.
3. Mapping tool: The Western Illinois University mapping tool originally focused on seven counties in Illinois, pulling in data from the two sources shown above and on the interpretation of aerial photographs that targets structures likely to house livestock. We will continue to update this mapping tool so that it may be used in setting inspection and permit determination priorities.

Since no combination of data within the datasets shown above can complete a formal determination of the need for an NPDES permit, we will rely on the datasets loaded into a GIS-based computer system (the mapping tool), accessible to Agency staff, to prioritize and assist in our inspections. Until and unless EPA or the federal courts decide otherwise or further clarify the manner and criteria by which we must make determinations on the need for NPDES permits at livestock facilities, Illinois EPA will rely on the mapping tool to prioritize inspections and make determinations for permits based on the evidence of actual livestock waste discharges.

Consequently, at this time, we believe we are adequately staffed in this program to administer the CAFO NPDES program.

Conclusions

As the number of facilities in Illinois cannot be satisfactorily projected, we must rely on rough estimates from various databases, and from that compare the estimate to the past workload and determine the number of inspections that might be completed. The best estimates of large CAFOs comes from the LMFA data (195) and we can also roughly estimate the number of large dairies as less than 50, based on the total number of inspected dairies (852). The total number of large CAFOs is then approximately 250, which also assumes very low numbers of facilities for poultry and all other types.

Illinois has over the last 10 to 15 years conducted approximately 200 site visits per year (in 2009, for example, we visited 226). We estimate therefore that over the course of two years all large CAFOs in Illinois could be visited. This rate of inspections would allow us to identify these CAFOs and acquire sufficient information to make permit determinations. This rate would also allow Illinois EPA to maintain permit and compliance coverage while addressing citizen complaint and emergency needs.